IDAHO
DEPARTMENT OF FISH & GAME

Jerry M. Conley, Director

Eagle Hatchery

Annual Report

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by

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Eagle Hatchery

ABSTRACT

The objective of the Eagle Fish Hatchery, located five miles southwest of Eagle in the heart of the Treasure Valley, in southwestern Idaho, is to rear 25,000 pounds of rainbow, kokanee, eastern brook and cutthroat hybrids for streams, lakes, reservoirs and drains, as part of the statewide hatchery system. The total number of these species actually raised and planted was 2,330,033 fish, weighing 28,145 pounds. Fish transferred to Eagle for planting out numbered 175,613 fish weighing 45,015 pounds.

It took 58,155 pounds of feed, with a conversion rate of 2.07 pounds of feed to produce a pound of fish. The cost per pound of fish produced was $.406 for fish food.

Author:

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OBJECTIVES

The objectives of the Eagle Hatchery are to;

1. Raise 25,000 pounds of rainbow, eastern brook, cutthroat hybrids, and kokanee for planting statewide in lakes, streams, reservoirs, and drains.

2. Release catchable size hatchery fish in 28 streams and 14 lakes and reservoirs in Region 3.

Waters normally stocked are: the Boise River, Middle Fork Boise River, North Fork Boise River, Mores Creek, Grimes Creek, Granite Creek, Crooked River, Beaver Creek, Five Mile Drain, North and South Boise Drain, Hamilton Corners Drain, Sand Hollow Drain, Elijah Drain, Wilson Drain, Payette River, North Fork Payette River, South Fork Payette River, Alder Creek, Clear Creek, Silver Creek, Anderson Creek, Middle Fork Payette River, Harris Creek, Squaw Creek, Second Fork Squaw Creek, Little Weiser River, Jordan Creek, Horseshoe Bend Pond, Caldwell Ponds One and Two, Cove Arm, Arrow rock Reservoir, Manns Creek Reservoir, C. Ben Ross Reservoir, Sagehen Reservoir, Tripod Reservoir, Horsethief Reservoir, Herrick Lake, Corral Creek Lake, and Camp Ei Da How.

A total of 71,005 made up pounds of catchables planted, 25,990 pounds were reared at Eagle, 45,015 pounds were transferred in from Hagerman.

3. Transfer kokanee spawners from Anderson Ranch trap, take eggs, incubate and rear for spring fry plants into lakes and reservoirs.

INTRODUCTION

Eagle Hatchery is located 12 miles due west of Boise, 7 miles north of Meridian, 5 miles west-southwest of Eagle, 12 miles east of Caldwell, and 12 miles northeast of Nampa. It is located in a central area of Treasure Valley. Its location is convenient for a heavy influx of visitors. Emphasis is put upon the station as a public relations center. A visitor's center is maintained for this purpose.

The hatchery receives its water from a complex of seven artesian wells, each well varying in water flow. Some wells are high in dissolved nitrogen gas, which causes problems part or all of the time at various stages of fish rearing. The total water flow is three cfs, which is the limiting factor for production.

The physical features at the Eagle Hatchery are:

2 permanent employees residences
1 office and feed storage building 1
hatchery building, housing
5 double stacks of Heath incubators
23 concrete vats
4 small raceways, 50' x 6' x 20" deep

8 large raceways, 138' x 5.5' x 1.5' deep
1 horseshoe pond, 400' x 30' x 29" deep
1 lower pond, 150' x 40' x 20" deep
1 visitors center and aquariums
1 quonset building, 40' x 80'
7 artesian wells

FISH PRODUCTION

Rainbow Trout

Rainbow trout is the primary species raised at Eagle. Fish on hand at beginning of fish year numbered 101,691 fish that weighed 13,632 pounds. At the end of the fish year, we had on hand some 127,440 fish weighing 8,372 pounds. We planted out 85,710 catchable fish weighing 25,990 pounds, 46,337 fish in the 3"-6" size that weighed 1,027 pounds.

Brook Trout

Brook trout received as eyed eggs numbered 262,640, and we planted 82,549 fish weighing 629 pounds. Most of the losses were due to nitrogen gas and cannibalism.

Kokanee

We took 1,711,570 eggs from kokanee captured in the South Fork of the Boise River. The adults were hauled to Eagle and spawned there. We planted 883,892 fish weighing 2,316 pounds.

Cutthroat Trout

Cutthroat hybrids, steelhead x cutthroat,from Henrys Lake stock were received and numbered 307,476. We planted 18,056 fish weighing 74 pounds. Mortalities were caused by F-2 hybrid, a weak fish, and nitrogen gas.

FISH HEALTH

This was the first year the holdovers were vaccinated for Enteric Red Mouth. There was never any sign noted of the disease. Some rainbow in the 3"-6" size range from Hayspur Hatchery were diagnosed as having IHN. The mortality was high on these fish. They were held for holdovers and have done well since, and they were vaccinated for Enteric Red Mouth. We lost around 35,000 rainbow holdover fingerling during the summer to predatory birds.

Bacterial gill disease is a problem once in a while, but three threatments of Potassium Permanganate really does a good job of controlling it. Keeping ponds cleaned with a vacuum pump helps suppress the problem also.

Mortalities in hatchery and west raceways were due to nitrogen gas and low dissolved oxygen levels. Vats with water falling through packed columns didn't have the problems the vats without packed columns did.

FISH TRANSFERS

There were 175,980 catchable rainbow transferred to Eagle for planting in Region 3 that weighed 45,015 pounds and averaged 3.9 fish per pound. The hatchery received 50,000 fish in the 0" to 3" size range that weighed 500 pounds. We also received 326,400 fish in the 3" to 6" size range that weighed 3,600 pounds.

FISH RELEASES

The fish planting season was average in most respects. We started planting the Boise River below Barber Dam to Star during February, and completed planting fish on the 10th of September.

SPAWNTAKING OPERATIONS

The South Fork of the Boise River kokanee trap and spawntaking operations were part of the hatchery program. Some 95% of the eggs came from adults hauled to Eagle Hatchery and spawned here. This worked out well for us because of the reduced manpower needs. We only needed to send one man over for fish. It is easier to work with fish here in the ponds taking eggs. The eye-up for the 1980 egg take was 84.2%.

FISH FEED UTILIZED

The fish feed used was Rangens dry feed and Oregon Moist Pellet. The following is a list of the sizes and cost of fish feed used:

starter	@.2819	100 lbs	26.55
#1 Fry	@.2769	100 lbs	25.00
#2 Fry	@.2769	550 lbs	162.62
#3 Fry	@.2578	1,800 lbs	507.04
#4 Fry	@.2578	1,500 lbs	416.25
#5 Fin Crumbles	@.2083	3,500 lbs	810.25
#6 Course Crumbles	@.2083	5,750 lbs	1,220.93
#7 4/32 pellet	@.1907	3,600 lbs	621.00
#8 5/32 pellet	@.2083	40,750 lbs	7,460.25
Total Rangens		57,655 lbs	$11,267.39
OMP Starter	@.3400	200 lbs	68.00
OMP 1/32 pellet	@.3400	300 lbs	102.00
Total OMP		500 lbs	170.00
Total		58,155 lbs	$11,437.39

The total pounds of feed fed was 58,155.
The total cost of the feed was $11,437.39.
The total number of pounds of fish produced was 28,145.
A conversion of 2.07 pounds of feed to produce a pound of fish.
The cost per pound of fish produced was $.406.

HATCHERY IMPROVEMENTS

Interiors of both residences were painted and carpet was laid over hard-wood floors in the living rooms and hallways.

An aluminum liner was made for the lead trough from the hatchery to the small raceways, and aluminum gates were made and installed at the bottom of the small raceways to make pond cleaning easier.

Electricity was installed in the quonset building and it was set up to store both trucks and tractors.

A gasoline powered pump was purchased and set up for a vacuum pump for pond cleaning. It takes about eight hours every two weeks to clean ponds. It does a very good job and the water stays clean in the ponds.

Six-inch baffles were installed on two-ton truck fish tank to keep water from sloshing out.

We installed packed columns for the Heath incubators, vats, and aquariums in the visitors center.

We painted the visitors center, aquariums, office, and crew room.

We replaced about ten valves. in the hatchery sprinkler system.

The office and storage building roof was replaced with new asphalt shingles.

SPECIAL STUDIES

A lot of work, research, and experimenting was done on degassing the well water. The best results were obtained with. packed columns. For the Heath incubators: we installed an eight inch. diameter PVC pipe sixteen inches long, packed with coke rings above each incubator for water to fall through. The well that serves this system does. not have a nitrogen gas problem, just a low level of dissolved oxygen. After flowing through the packed columns, the dissolved oxygen was increased from two-ppm to seven-ppm at the top of the incubator.

The hatchery vats have been set up with a six-inch PVC supply line, and we retired the old cement lead trough to pick up more elevation, we lowered the water level in the vats to five-inches. By doing this, we were able to install a 30" packed column over each vat. With a one inch PVC pipe coming off of the main line to each vat, and the water falling through the 30" packed column, the dissolved oxygen is up to 10 ppm coming into the vats. Nitrogen gas does not appear to be any problem since these changes. We can also use up-welling incubators in the hatchery by pumping water through packed columns outside in hatchery supply tanks.

MISCELLANEOUS ACTIVITIES

Groups visiting hatchery by appointment follows:

	7 senior citizen groups
	29 scouting groups
	12 pre-school groups
	21 school classes
Total:	69 guided tours

HATCHERY NEEDS

We need to rebuild the lower pond so it can be used for more production, and a settling area that can be vacuumed out.

The septic tank needs to be installed deeper for dwelling #2, and new domestic water lines installed from the pump to both houses. The present system is corroded to the point where we are not getting enough water to the houses.

We need to seal coat all present black top on hatchery grounds, which is starting to crack and break up.

Packed columns should he installed on the four water inlets to the north raceways.

All the racks and screens for the hatchery vats need to be replaced.

ACKNOWLEDGEMENTS

Hatchery staffing during the fish year included: Walt Rast, Fish Hatchery Superintendent II; Steve Dillon, Fish Hatchery Superintendent I; Mel Prince, Brad Christensen, Fish Transport Operators; Elaine Rippey and Chris Doudle, Laborers.